

FACTORISING

A: I know what factors are

B: I can factorise by taking out a common factor

C: I can factorise difference of two squares

D: I can factorise quadratic expressions with $a = 1$

E: I can factorise quadratic expressions with $a > 1$

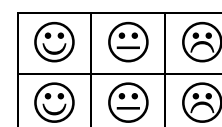
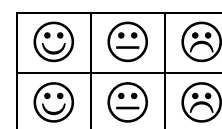
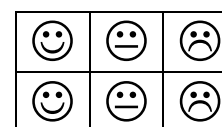
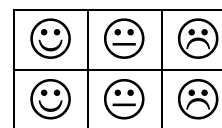
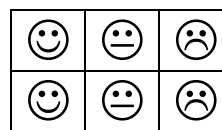
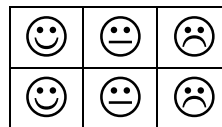
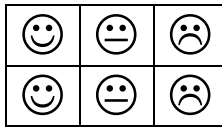
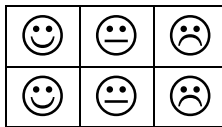
F: I can factorise expressions using two steps

G: I can apply factorisation to problems

H: I can work with algebraic expressions

I: I can complete the square in a quadratic expression ($a = 1$)
– write in the form $(x + p)^2 + q$

J: I can complete the square in a quadratic expression ($a > 1$)
and $a \in \mathbb{W}$)
– write in the form $a(x + p)^2 + q$



What are the factors of?
 $24, 50, 81, 4x^2, 12w^2, x^3$

Factorise the following:-
 $4x + 20, 15ab - 6b, x^2 + 7x,$
 $12xyz - 3x^2y + 15yz$

Factorise the following:-
 $a^2 - b^2, x^2 - 16, 25x^2 - 49y^2$
 $x^4 - 1$

Factorise the following:-
 $x^2 + 6x + 5$ $x^2 - 7x + 12$
 $x^2 - 10x + 24$ $x^2 + 6x - 16$
 $x^2 - 5x - 36$ $6 + x - x^2$

Factorise fully:-
 $2x^2 + 11x + 15$ $3x^2 - 10x - 8$
 $6x^2 - 13x + 6$ $8x^2 - 14x - 15$
 $12 - 11x + 2x^2$

Factorise fully:-
 $2a^2 - 18b^2$ $12x^2 - 75$
 $3w^2 + 12w + 9$ $5x^2 + 10x - 40$
 $8x^2 - 16x + 6$

Find expressions for the breadth of the rectangle.

$$\begin{array}{c} x^2 - x - 6 \\ x - 3 \end{array}$$

$$\begin{array}{c} 2x^2 + 5x + 2 \\ 2x + 1 \end{array}$$

Expand and factorise:
 $x(x + 2) + 3(x - 8)$

Prove that
 $w(w + 1) - 5w + 4 = (w - 2)^2$

$x^2 + 8x$ $x^2 - 6x$
 $x^2 + 8x + 11$ $x^2 - 10x + 5$
 $x^2 + 8x - 3$ $x^2 + 5x$
 $x^2 - 11x + 3$

$2x^2 + 8x$ $3x^2 + 12x + 5$
 $5x^2 + 30x - 16$ $4x^2 - 12x - 11$